



**Department of Environmental Protection
Bureau of Land & Water Quality
O&M Newsletter**

November 2005

A monthly newsletter for wastewater discharge licensees, treatment facility operators, and associated persons

Electronic Copies of the O&M News

We continue to distribute the *O&M News* electronically to anyone who sends us a valid email address. We also have the current *O&M News* and archived copies of past issues on our web site at

<http://www.state.me.us/dep/blwq/newslet/omnews.pdf>, but e-mail is a quicker way to get the news in your hands.

If you have e-mail and would like to receive the O&M News electronically instead of in the mail, please send an e-mail to: leslie.a.rucker@maine.gov

Fall 2005 Exam

By the time you get this O&M News, the Fall exam will probably be history. For those of you who took the exam, the results will, hopefully, be back before Christmas. If you're thinking about taking the Spring exam, it will be given on May 10, 2006 in the usual locations. Applications ***must*** be postmarked by March 24, 2006 or in our hands by March 27, 2006.

Dick Darling

For Practice

1. What is the best long-term fix for high F/M sludge bulking?
 - a. Add chlorine to the RAS.
 - b. Decrease sludge wasting.
 - c. Increase sludge wasting.
 - d. Reduce sludge age.
2. How would you reduce the growth of bacteria in a filter bed?
 - a. Adjust the pH
 - b. Backwash more frequently
 - c. Pre-chlorinate
 - d. Slow the rate of filtration
3. If the feed time for sludge centrifuge operated in a batch mode is less than the optimum time,
 - a. a better centrate will result
 - b. a better effluent quality will result
 - c. a dryer discharge solid will result
 - d. a wetter discharge solid will result
4. Determine the solids loading on a floatation unit if the flow is 1.5 MGD and the influent suspended solids are 1,400 mg/l
 - a. 17,500 lb/day
 - b. 14,000 lb/day
 - c. 12,600 lb/day
 - d. 11,200 lb/day

Approved Training

November 8, 2005 in Presque Isle, ME -
Pipebursting: A Practical and Diverse
Rehab Option - sponsored by JETCC –
207-253-8020 – Approved for 6 hours

November 11, 2005 in Augusta, ME –
Developing Written Safety Plans -
sponsored by WPETC – 207-761-2991 –
Approved for 4 hours

Nov 10, 2005 in Bangor, ME - One Plan -
sponsored by JETCC – 207-253-8020 –
Approved for 6 hours

November 15, 2005 (a.m.) in North
Vassalboro, ME - QA/QC of your
Laboratory Equipment - sponsored by
JETCC – 207-253-8020 – Approved for 3
hours

November 15, 2005 (a.m.) in North
Vassalboro, ME - Instrument Calibration
Basics - sponsored by JETCC – 207-253-
8020 – Approved for 3 hours

November 11, 2005 in Bangor, ME –
Developing Written Safety Plans -
sponsored by WPETC – 207-761-2991 –
Approved for 4 hours

Nov 17, 2005 in Portland, ME - One Plan -
sponsored by JETCC – 207-253-8020 –
Approved for 6 hours

November 30 – December 1, 2005 in
Freeport, ME – MRWA Annual
Conference – 207-729-6569 – Approved
for credit depending on length of class

Dec 7, 2005 in Orono, ME - Phosphorus
Removal - sponsored by JETCC – 207-
253-8020 – Approved for 6 hours

Dec 6 & 7 in Brewer, ME - Laboratory
Procedures with voluntary NEWEA Exam
- sponsored by JETCC (In cooperation
with NEIWPCC) – 207-253-8020 –
Approved for 9 hours

December 14, 2005 in Augusta, ME -
Access for Wastewater and Water
Operators - sponsored by JETCC – 207-
253-8020 – Approved for 6 hours

Note:

JETCC stands for Joint Environmental
Training Coordinating Committee
MRWA stands for Maine Rural Water
Association

MWWCA stands for Maine Wastewater
Control Association

NEIWPCC stands for New England
Interstate Water Pollution Control
Commission

WPETC stands for Wright Pierce
Environmental Training Center.

Answers to *For Practice*:

1. b A high F:M ratio means that there
is a lot of food for the amount of
sludge in the system. To lower the
F:M ration you need to increase the
mass of sludge by wasting less.
2. c the most effective way to remove
bacteria from a filter bed is to kill
them or render them unable to
reproduce. This is most easily done
by applying chlorine or another
disinfecting agent.
3. d If the feed time is less than
optimum, the sludge is being fed to
the centrifuge faster than the
optimal rate and not as much water
will be removed, resulting in a
wetter sludge cake from the
centrifuge
4. a $1.5 \text{ MGD} \times 1400 \text{ mg/L} \times 8.34 \sim$
17,500 lbs.

Proposed Amendments to the Wastewater Operator Certification Rules

The DEP is proposing to amend the rules governing the certification of individuals who are responsible for operating public and private wastewater facilities. These rules help ensure that those individuals have the skills and knowledge necessary to operate those facilities in a manner that minimizes their impact. The Wastewater Operator Certification rules were last amended in 1984, and they are overdue for an update. Many of the amendments are minor clarifications and formatting changes.

A major amendment to the rule will create a new classification of wastewater treatment plant operator for small facilities using spray irrigation for treatment. If this class of operators is not created, owners and operators of campgrounds, trailer parks and seasonal industries that typically use this type of treatment will be required to employ operators who are certified to operate facilities that discharge to the surface waters of the state. Since the type of treatment, and therefore the skills and knowledge necessary to properly operate these systems, are different, establishing a new category of operators is necessary. The fee structure is being removed from the rule in anticipation of transferring the administration of the Wastewater Operator Certification Program to an outside organization. DEP staff anticipate that the fees for initial certification and biennial renewal will increase. The extent of that increase has been discussed with the Executive Committee of the Maine Wastewater Control Association and they have agreed to the proposed fee levels. The Commissioner will continue to sign all

wastewater operator certificates and DEP staff will oversee the program.

The existing rule was reviewed for technical content and wording. Comments made by members of the DEP Staff were drafted into language and fit into the proposed amendments to the rule. The proposed amendments were circulated to staff within the Department, comments were received and adjustments made. The adjusted rule was then distributed to the members of the Executive Committee of the Maine Waste Water Control Association (MWWCA) who reviewed and commented on the rule. As with the comments from DEP staff, the comments from the MWWCA Executive Committee members were reviewed and adjustments were made to the proposed amendments. The amended rule, as now proposed incorporates comments from both DEP Staff and representatives from the regulated community.

The Board of Environmental Protection posted these rule amendments to public comment on November 3, 2005, with a hearing on December 15, 2005 at 1:30 p.m. The deadline for submittal of written comments is December 27, 2005.

Standard Conditions

Other Requirements – E.1 and E.4

This is the tenth in a series of articles that have run over the last two years which will ultimately cover all of the “STANDARD CONDITIONS” found in all permits. The articles will refer to the current set of Standard Conditions, but will apply similarly to previous versions and editions;

They've always copied or closely tracked DEP and EPA regulations. Regardless of when your permit was issued, you need to dig out the Standard Conditions (a separate, apparently generic attachment to your "SPECIAL CONDITIONS") and review them. If you're like a lot of other treatment facility owners or operators, this may be your first time! It may seem like pretty dull, "boilerplate" stuff, but the Standard Conditions are important to assuring that your treatment facility is in the full compliance with its permit and all applicable laws and statutes. The complete list of Standard Conditions may be found on line at:

<http://www.state.me.us/dep/blwq/docstagn/wastepage.htm#gen>

E. OTHER REQUIREMENTS

1. **Emergency action – power failure.** *Within thirty days after the effective date of this permit, the permittee shall notify the Department of facilities and plans to be used in the event the primary source of power to its wastewater pumping and treatment facilities fails as follows.*

(a) For municipal sources. During power failure, all wastewaters which are normally treated shall receive a minimum of primary treatment and disinfection. Unless otherwise approved, alternate power supplies shall be provided for pumping stations and treatment facilities. Alternate power supplies shall be on-site generating units or an outside source which is separate and

independent from sources used for normal operation of the wastewater facility.

(b) For industrial and commercial sources. The permittee shall either maintain an alternate power source sufficient to operate the wastewater pumping and treatment facilities or halt, reduce or otherwise control production and or all discharges upon reduction or loss of power to the wastewater pumping or treatment facilities.

One thing you can be certain of is that, sooner or later, due to natural or humanly induced events, you will lose power. In fact, depending on where in the state you are located, this may be an all-too-frequent event. Many of us who have experienced prolonged power outages at home, particularly during bad weather, have elected to install gas or diesel generators to provide for the basic electrical services (water pump, heating circulation, refrigerator, a few lights, etc.) we deem essential. For larger treatment systems, it's fundamentally the same thing. The goal is usually accomplished through the use of dedicated or portable generators, but other power supplies, holding tanks, stand-by vacor trucks or other arrangements may be approved by the Department.

The expectation for municipal treatment plants, which are considered essential, not-for-profit public services, is that at a minimum they provide for pumping needs throughout the collection and treatment system, settling of suspended solids from the waste stream, and disinfection of the effluent. This is intended to meet the basic need for public sanitation (on a temporary basis) while keeping the overall environmental impact of a power failure to a minimum. Especially with some of the larger treatment facilities, it would be impractical and uneconomical to provide for full-facility power back-up. Additionally, POTWs do not have the option of “closing up shop” during a power failure – they must be prepared to handle incoming wastewater under any conditions, year round, 24/7. Backup power sources, like generators, must be independent of the standard power source – typically the “northeast grid” – which has at the time become unavailable! These backup generating sources are preferable hardwired in place, and ready to activate automatically in the event of an interruption in the grid; don’t forget to test them and their associated alarm systems periodically. Backup power units should be sufficient to start and run all pumps needed to handle peak flows, as well as critical lighting, ventilation, pump

controls, and sump pumps. In some cases, and only with Department approval, alternative mobile back up systems may be used; periodically test these and their alarm and activation procedures, too. Keep in mind that such systems need to be available at a moment’s notice, practical to deliver on site and install where and when needed, any time of the day or night and in all kinds of weather.

Industrial and commercial sources, on the other hand, are private, for-profit enterprises. Though inclusive of the possibility of loss of business or production, even the larger, more complex businesses do indeed have the option to shut down; loss of power typically shuts them down, anyway. These sources have a choice; either accept that the effluent-generating part(s) of the process must be controlled or shut down in the event of a power outage, thus avoiding the cost of installing and operating backup generating capacity, or accept such backup costs and efforts as necessary or desirable for the maintenance of business activity.

4. **Connection to municipal sewer.** *(applicable only to industrial and commercial sources) All wastewaters designated by the Department as treatable in a municipal treatment system will be cosigned to that system when it is*

available. This permit will expire 90 days after the municipal treatment facility becomes available, unless this time is extended by the Department in writing.

The Department recognizes that a well-run POTW is probably the best form of treatment for a wide range of industrial and commercial wastewaters. In some cases, such as a large, integrated pulp & paper mill, the volume or characteristics of the wastewater may require a stand-alone facility treatment system. In others, a facility pretreatment system may be necessary before discharging to a POTW; here, Department pretreatment rules may apply. For most small and medium sized businesses, however, a municipal system is the most effective and economical alternative.

A problem is that unless an industrial or commercial source is located within the service area of a municipal system, there may not be a POTW available. Alternatively, the nearest POTW may be so far away, or so located, such that it is impractical or uneconomical to connect into its collection system. The Department will make a determination on the “availability” of a municipal treatment system based on the POTW’s willingness to accept a given waste, given the plant’s capacity and the compatibility of the waste, and local ordinances that specify when an entity must connect. Additional considerations are local environmental concerns, physical

distance, intervening terrain and conditions, cost, and anything else deemed appropriate. When a new municipal system is built, or an existing collection system is extended such that it becomes “available”, this connection clause becomes active, and the permittee must notify the Department of their plan and timing for compliance.

As always, if you have any questions or concerns regarding your license or any other water compliance issues, contact your Facility Inspector. He or she will be able to work with you, or direct you to the appropriate Department resources.

All water quality laws and regulations can be accessed at:

<http://www.maine.gov/dep/envIRONLRR.htm>

Jim Crowley

DEP Wastewater Staff Members Sit for Wastewater Certification Exam.

Fulfilling a commitment made by Bureau of Land and Water Quality Director, Andy Fisk, to the Executive Committee of the Maine Wastewater Control Association, 23 members of the bureau staff sat for the Grade 3 Wastewater Operator Certification exam. Virtually all staff from the Bureau’s licensing, enforcement, compliance and technical assistance sections, including the Bureau Director himself, took the exam on September 28, 2005. Two DEP compliance inspectors and one license writer are certified wastewater operators at Grade 3 or higher and they were excused from the exam.

Dick Darling, who serves as Maine's Wastewater Operator Certification Officer, created, proctored and corrected the exam. "The exam was created using the need-to-know criteria developed by an *ad hoc* MWWCA certification committee in 1995", Darling declared. "I used three ABC exams to develop questions for the DEP staff exam to make sure that the exam was equivalent to the exam seen by an operator sitting for the same grade." Since many DEP staff are involved as proctors for the exams given for operators in May and November, Darling decided to create and proctor a separate exam for the DEP staff. "That way, there could be no question about staff having access to the exam before the test date," he stated.

While a vast majority of the DEP staff members who took the exam received a grade of 70 or higher, not all who passed the exam are eligible to be certified as wastewater operators. "Any person who wants to be certified as a Wastewater Treatment Plant operator in Maine must meet the experience requirements in the Department's rules and pass the required exam," Darling noted. He continued, "I will review the experience of the staff members who passed the exam and those who meet the experience requirements will be offered the opportunity to apply for certification."